molex® APPLICATION SPECIFICATION

1.0 SCOPE

This specification covers the requirements for the application of Mega-Fit 5.70 mm pitch wire to board connector systems.

2.0 PRODUCT NAME AND SERIES NUMBERS

Mega-Fit Female Crimp Terminal	76823 / 172063
Mega-Fit Receptacle Housing	170001 / 171692
Mega-Fit Vertical Header	76829 / 172065 / 171597
Mega-Fit Right Angle Header	76825 / 172064 / 171596

3.0 REFERENCE DOCUMENTS

See the appropriate sales drawings for information on specific part numbers and materials.

4.0 GENERAL APPLICATION NOTES

Appearance:

- Parts conform to class "B" requirements of cosmetic specification PS-45499-002 except where noted on the sales drawings.

Connector Application

- This connector system is designed to mate gold plating to gold plating OR tin plating to tin plating. Never cross mate tin plated parts to gold plated parts.
- This connector system is not designed for current sharing (i.e. splitting one current load across multiple circuits)
- Connectors are not to be mated or unmated while circuits are live except per the current interrupt rating listed in product specification: PS-76823-100

Packaging

- The parts should remain in the original Molex packaging until ready for use to prevent damage.

Chemical Exposure

- Do not store terminals or header assemblies near any chemicals listed below as they may cause corrosion in the terminal contacts.

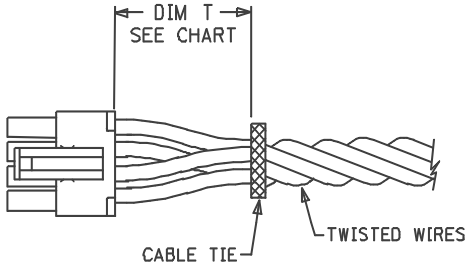
Alkalies	Ammonia	Citrates	Phosphates Citrates	Sulfur Compounds
Amines	Carbonates	Nitrites	Sulfur Nitrites	Tartrates

Crimped Terminal Extraction

- Female terminal extraction tool: See Molex part# 638240800 instructions online on website. Do not reuse terminals that have been removed with the extraction tool. The receptacle housing can be reused if it was not damaged.

Minimum wire bend, cable tie or twist location

Circuit Sizes	Dim T Min.
2	.50” (12.7 mm)
4-6	.75” (19.1 mm)
8	1.00” (25.4 mm)
10-12	1.25” (31.75 mm)



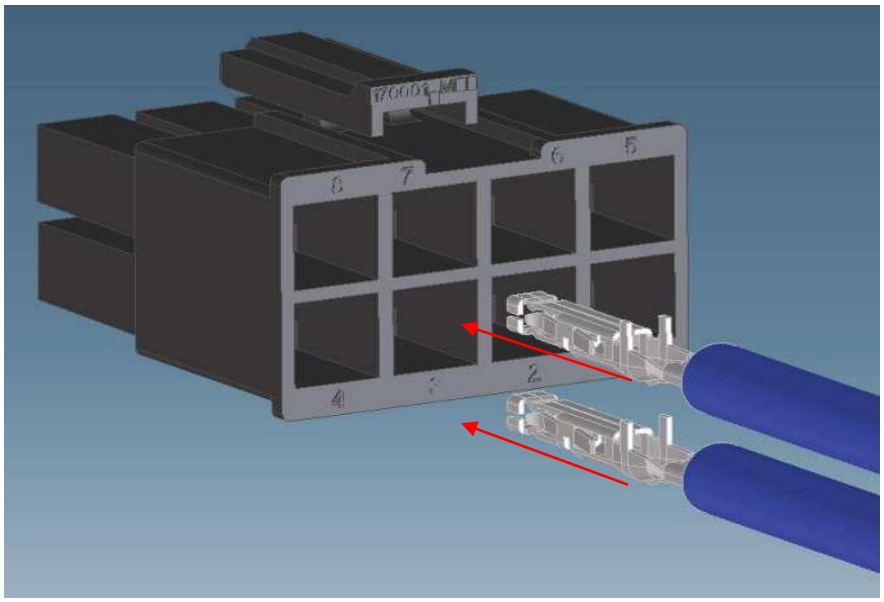
- The “T” dimension defines a “free” length of wire, or a length of wire that is not subject to significant bias by external factors such as a wire tie, wire twisting, or other means of bending or deforming of the wires that repositions them from their natural relaxed state or location where they enter the housing. This dimension is a general recommendation and may need to be adjusted for different wire gauges and wire type and insulation thickness and insulation material.
- Wires are to be dressed in such a manner to allow the terminals to float freely in the receptacle pocket.

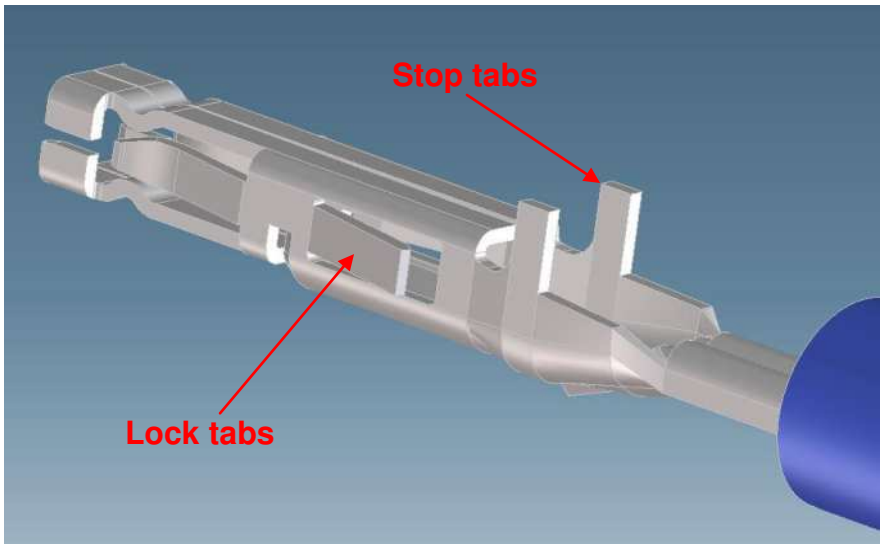
Connector Testing

- Do not probe female terminal – use only Flat faced pogo pin styles that will not enter the terminal opening.
- Do not use Megafit connectors as test parts, they are not intended to be used with repeated mating. Follow durability cycles as listed in PS-76823-100.

Crimped Terminal Insertion

- Terminals are inserted in the same orientation for both top and bottom row. They should be inserted square with the housing opening with the stop tabs pointed up and the lock tabs will be facing the sides

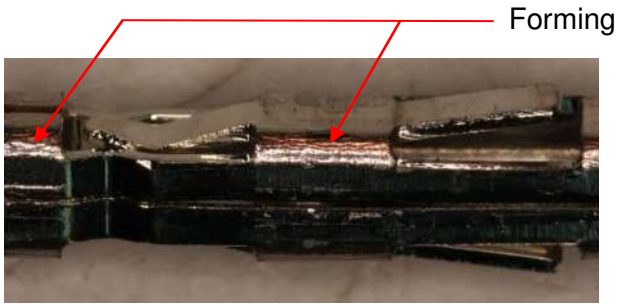




- Ensure terminals are fully seated and locked during terminal insertion to the receptacle housing

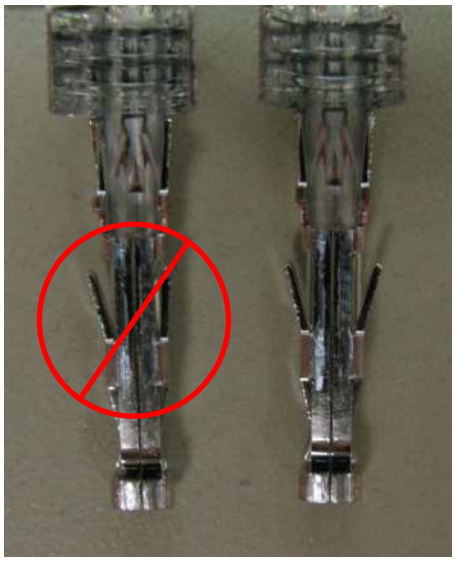
Crimp Terminal Appearance

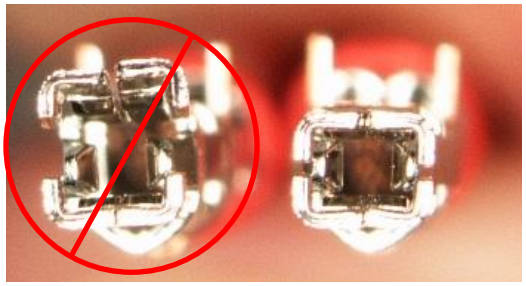
- Forming marks on female terminal are normal. These are due to stretching of the plating during the forming process and are superficial cracks on the plating surface.



Crimp Terminal Function

- Do not use terminals with damaged lock tabs or damage on the front of the terminals:





Crimp Terminal Handling

- Due to exposed terminal interface, keep crimp terminals on prepackaged reel until they are crimped onto wires. Do not precut and bulk pack terminals due to risk of damaging the contact interface. Store and handle crimped terminals so the interface does not make contact with other terminals or foreign objects. If terminal interface is damaged please discard prior to assembly.

Crimping

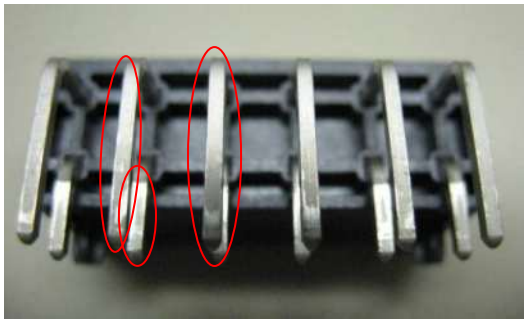
- For acceptable crimp tools and specifications see application tooling section on Molex.com listed for each terminal part number.
- Use with multi strand wire only. Single strand wire should not be used.
- This female crimp terminal is designed for single wire crimping only, no double wire crimping is allowed.
- Use only Molex specified crimp tooling, refer to Molex.com for acceptable crimp tooling. Crimped terminals must also meet Molex crimp specifications. Using crimp tooling/specifications other than specified voids any product warranties and will negatively impact mechanical and electrical performance.

Header Appearance

- Discoloration in the bandolier carrier area of the pin is inherent to the plating process and is due to the masking effect of the carrier. This discoloration is in a non-functional area of the pin and will not affect the performance of the header assembly. Refer to cosmetic specification PS-45499-002.

Right Angle Header Appearance

- Forming marks on header pins are acceptable. Refer to cosmetic specification PS-45499-002.



Header Assembly to Board

- Headers are designed with press fit pegs and need to be pushed into the circuit board.
- Header should be flush with board after insertion.
- See below for solder process information.

Solder Process Temperatures

- Wave Solder: 265°C Max
- Reflow Solder: 260°C Max

Reflow Soldering Profile

- See AS-40000-5013